

PONDEROSA TERRACE ESTATES (PWSNO 1090101) SOURCE WATER ASSESSMENT REPORT

October 17, 2002



State of Idaho Department of Environmental Quality

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This risk assessment is based on a land use inventory in the well recharge zone, sensitivity factors associated with how the well was constructed, and aquifer characteristics.

This report, *Source Water Assessment for Ponderosa Terrace Estates*, describes the public drinking water well; the well recharge zone and potential contaminant sites located inside the recharge zone boundaries. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this public water system. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

Ponderosa Terrace Estates is located in rural Bonner County, Idaho near Talache on Lake Pend Oreille. Drinking water for the housing development is supplied by two wells drawing from different depths in shale formation on the western shore of the lake. The system serves 18 residential connections. Well #1 is only 38 feet deep. The system chlorinates its water to treat persistent microbial contamination that may originate in the shallow ground water table Well #1 pumps from. Based on lead and copper sample results from the time when it was the sole source, Well #1 may need to be evaluated for corrosivity. Well #2, drilled in December 2000, is 605 feet deep. A sample from Well #2 tested in February 2001 had a Langlier Index of minus 2.883, also indicating a potential for corrosivity.

A ground water susceptibility analysis of the Ponderosa Terrace Estates wells ranked Well #1 at high for microbial contamination. Well #1 is ranked moderately susceptible to other classes of regulated contaminants. Well #2 ranked moderately susceptible to microbial and chemical contamination. Risk factors associated with local geology added the most points to the final susceptibility scores for both wells.

With the bacterial contamination problem mostly resolved through disinfection, the inability of the system to provide an adequate amount of water year round, inconsistent maintenance and operations, and financial difficulties present a greater challenge to the system and its customers than water quality issues.

For Ponderosa Terrace Estates, drinking water protection efforts should focus first on staying in compliance with *Idaho Rules for Public Drinking Water Systems*. It would be useful for the system to develop a written testing and maintenance schedule so routine tasks are performed in a timely manner. The water shortage needs to be evaluated since there are several possible causes. The system should have a water emergency plan to deal with future shortages and other threats to the water supply.

This assessment should be used as a basis for determining appropriate new source water protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. Water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. The Coeur d'Alene Regional office of the Department of Environmental Quality or the Idaho Rural Water Association can help systems develop a plan for protecting their drinking water.

SOURCE WATER ASSESSMENT FOR PONDEROSA TERRACE ESTATES

Section 1. Introduction - Basis for Assessment

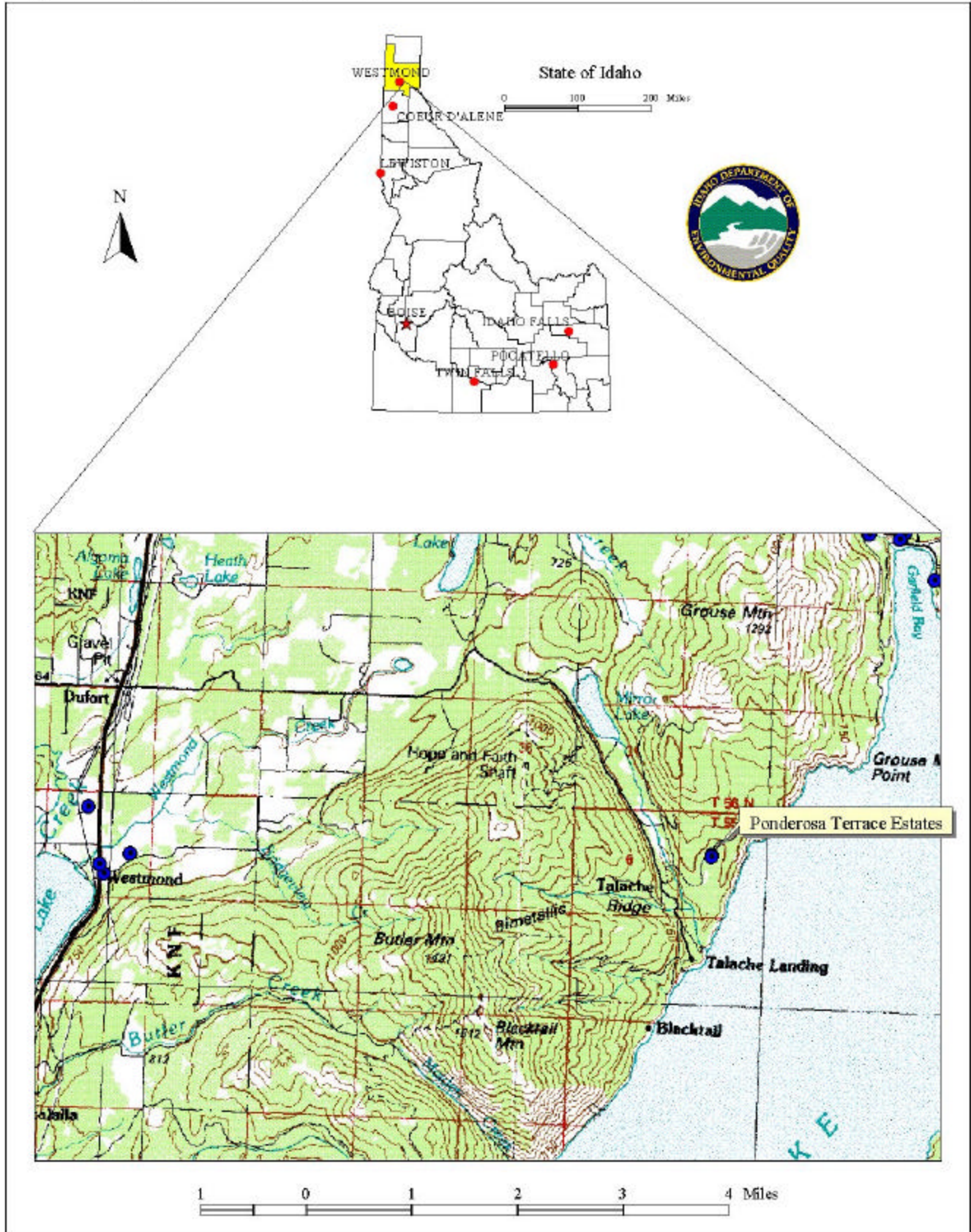
The following sections contain information necessary for understanding how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and an inventory of significant potential sources of contamination identified within that area are included. The ground water susceptibility analysis worksheets used to develop this assessment are attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess every public drinking water source in Idaho for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. These assessments are based on a land use inventory inside the delineated recharge zones, sensitivity factors associated with how the well is constructed, and aquifer characteristics. The state must complete more than 2900 assessments by May of 2003. Because resources and the time available to accomplish assessments are limited, an in-depth, site-specific investigation for every public water system is not possible.

The results of the source water assessment should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system The ultimate goal of this assessment is to provide data to local communities for developing a protection strategy for their drinking water supply. The Idaho Department of Environmental Quality recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Figure 1. Geographic Location of Ponderosa Terrace Estates



Section 2. Preparing for the Assessment

Defining the Zones of Contribution - Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the well recharge area into time of travel zones indicating the number of years necessary for a particle of water to reach a well. DEQ used a refined computer model approved by the EPA to delineate the recharge zones for public water system wells. The computer model used data DEQ assimilated from a variety of sources including local well logs.

Ponderosa Terrace Estates is a residential development in rural Bonner County near Talache on the west side of Lake Pend Oreille (Figure 1). Drinking water for Ponderosa Terrace Estates customers comes from two wells. Well #1 was drilled in 1972 to a depth of 38 feet. The estimated capacity of the well at the time it was drilled was 20 gpm. Well #2, drilled in December 2000 about 50 feet south of Well #1, is 605 feet deep with an estimated capacity of 5 gpm. The recharge zone delineated for the Ponderosa Terrace Estates wells covers 3 acres divided into 0-3, 3-6 and 6-10-year time of travel zones. The primary direction of ground water flow is from north to south.

Identifying Potential Sources of Contamination

The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. Inventories for public water systems in Idaho were conducted in two-phases. The first phase involved identifying and documenting potential contaminant sources inside individual source water assessment areas through the use of computer databases and Geographic Information System maps developed by DEQ. The maps and inventory lists were then sent to system operators for verification and correction in the second or enhanced part of the inventory process.

Figure 2, *Ponderosa Terrace Estates Delineation and Potential Contaminant Inventory* on page 7 of this report shows the location of the Ponderosa Terrace Estates wells, and the zone of contribution DEQ delineated for the wells. Most of the land inside the delineation boundaries is undeveloped forest. Roads crossing the well recharge zone carry low volume local traffic.

Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. When a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation.

Section 3. Susceptibility Analysis

The susceptibility to contamination of all groundwater sources in Idaho is being assessed on the following factors:

- physical integrity of the well,
- hydrologic characteristics,
- land use characteristics, and potentially significant contaminant sources
- historic water quality

The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. A high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking. The Susceptibility Analysis Worksheets in Attachment A show in detail how the Ponderosa Terrace Estates wells scored.

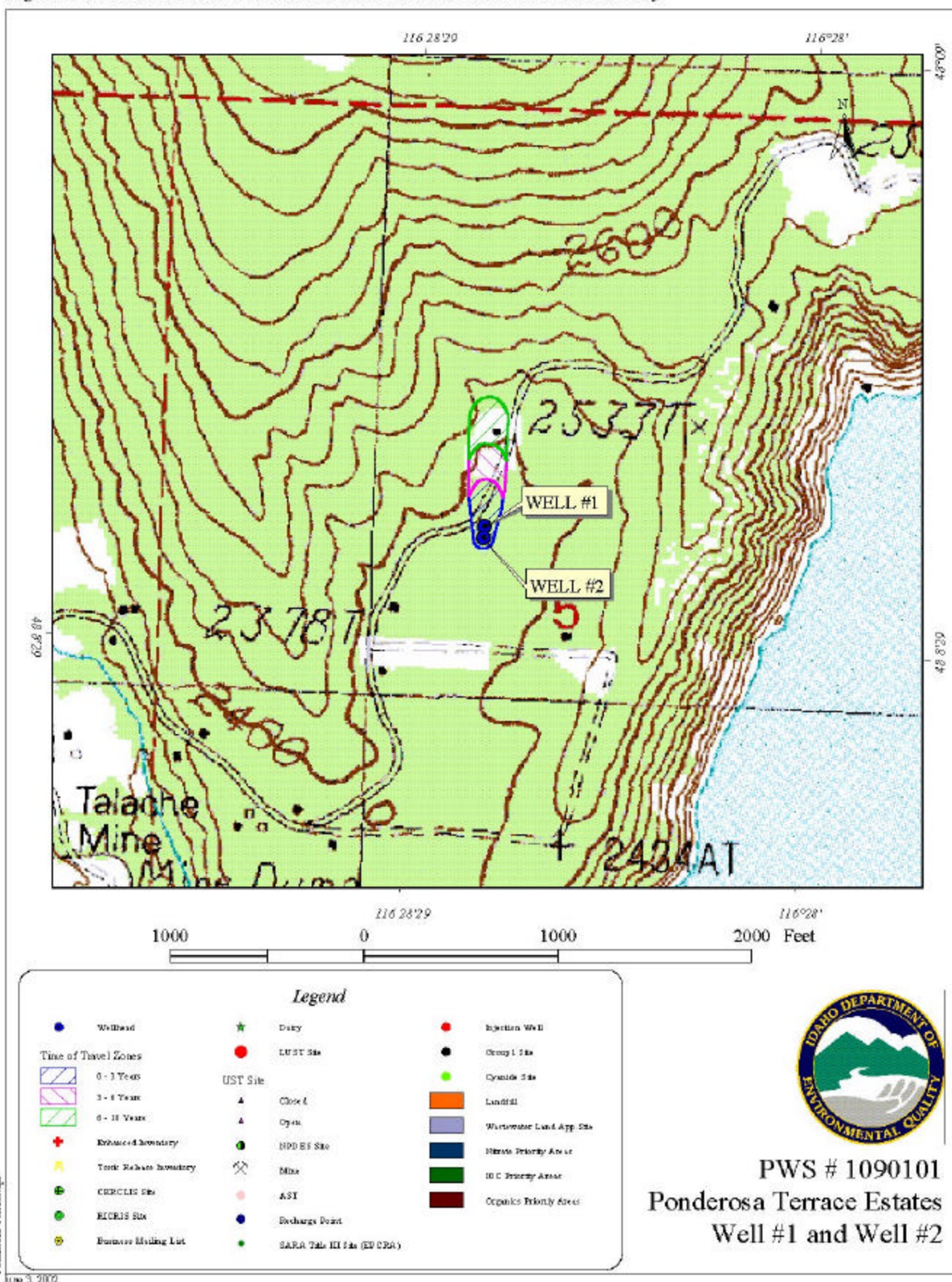
Well Construction

Construction features directly affect the ability of a well to protect the aquifer from contaminants. Lower scores imply a well that can better protect the water. This portion of the susceptibility analysis relies on information from individual well logs and from the most recent sanitary survey of the public water system. The last Sanitary Survey of the Ponderosa Terrace Estates was in April 1998. No deficiencies were noted in well head and surface seal maintenance. Repairs to the flow meter, installation of a sampling tap, check valve and a discharge to waste assembly were completed in October 1999.

The Ponderosa Terrace Estates Well #1 was drilled in 1972 to a depth of 38 feet. The 6-inch steel casing reaches from 18 inches above the surface to the full depth of the well, extending 3 feet into in a layer of cemented gravel. According to the well log, the casing is not perforated and no well screen was installed. The 20-foot deep surface seal terminates in a permeable soil stratum composed of silt and gravel. During drilling, the first water bearing stratum was encountered between 8 and 25 feet below ground. The static water level in the well is 6 feet the below the surface.

Well #2, drilled in December 2000, is 605 feet deep. The well has a six inch steel inner casing from 2 feet above grade to 55 feet below, and a PVC liner to the full depth of the well with perforations from 8 to 603 feet below ground. It has a bentonite pressure seal from ground level to 51 feet below the surface designed to prevent the flow of water from a gravel and cobble layer between 20 and 40 feet below ground into deeper portions of the well. Water was encountered in a fracture zone from 200 to 201 feet below ground, in a purple shale layer from 201 to 203 feet, and in a black shale layer from 553 to 575 feet below the surface. The cumulative flow of the three deeper water-producing layers is about 5 gpm. The static water level and draw down during pumping are not known.

Figure 2. Ponderosa Terrace Estates Delineation and Potential Contaminant Inventory.



PWS # 1090101
Ponderosa Terrace Estates
Well #1 and Well #2

Hydrologic Sensitivity

The hydrologic sensitivity score for Ponderosa Terrace Estates Well #1 is 6 points out of 6 points possible. The score for Well #2 is 5 points. These scores reflect natural geologic conditions in the recharge zone as a whole and at the well sites. Information for this part of the analysis is derived from the soil classification inside the delineation boundaries and from the soil profile reported on the well log.

The upper layers of soil in the Ponderosa Terrace Estates recharge zone are well drained to moderately well drained. Porous soils are less able to inhibit migration of contaminants toward the wells than soils that drain slowly. 4 feet of topsoil cover the shallow water table that Well #1 draws from, then 4 feet of boulders. Well #2 draws from deeper water tables that are protected by a confining shale layer, and isolated from the shallower water table by the deep outer casing and clay seal mentioned above.

Potential Contaminant Sources and Land Use

Most of the land in the Ponderosa Terrace Estates well recharge zone is undeveloped forest. Roads crossing the delineation boundary carry low volume local traffic. The wells are on dedicated well lots with all sanitary setback requirements fulfilled. No potential contaminant sources are documented inside the recharge zone for the wells.

Historic Water Quality

Persistent bacterial contamination has been the primary water quality issue for Ponderosa Terrace Estates. The system completed a new chlorinator building in the fall of 1999, and is required to test and record the chlorine residual daily to ensure adequate disinfection. Lead and copper concentrations in a distribution system sample drawn in September 1980 and some lead/copper samples tested in May and December 1999 exceeding the action level for those contaminants, suggest that water from Well #1 may be corrosive. Corrosive water is capable of leaching lead and copper from plumbing pipe and fittings. The Langlier Index, an indication of corrosive potential, for Well #2 is minus 2.883. The Index was calculated from water quality analysis results obtained in February 2001. Chemical and radiological monitoring results for Well #1 are summarized on Table 1-1. Testing for Well #2 is incomplete. Available results are listed on Table 1-2.

Table 1-1. Ponderosa Terrace Estates Well #1 Test Results

Primary IOC Contaminants (Mandatory Tests)							
Contaminant	MCL (mg/l)	Results (mg/l)	Dates	Contaminant	MCL (mg/l)	Results (mg/l)	Dates
Antimony	0.006	ND*	9/11/80, 12/4/84, 6/30/99	Nitrate	10	ND TO 0.24	9/11/80, 12/4/84, 6/30/99
Arsenic	0.01	ND	9/11/80, 12/4/84, 6/30/99	Nickel	N/A	ND	9/11/80, 12/4/84, 6/30/99
Barium	2.0	0.02	6/30/99	Selenium	0.05	ND	9/11/80, 12/4/84, 6/30/99
Beryllium	0.004	ND	9/11/80, 12/4/84, 6/30/99	Sodium	N/A	1.7, 1.84	12/3/84, 6/30/99
Cadmium	0.005	ND	9/11/80, 12/4/84, 6/30/99	Thallium	0.002	ND	9/11/80, 12/4/84, 6/30/99
Chromium	0.1	ND	9/11/80, 12/4/84, 6/30/99	Cyanide	0.02		9/11/80, 12/4/84, 6/30/99
Mercury	0.002	ND	9/11/80, 12/4/84, 6/30/99	Fluoride	4.0		9/11/80, 12/4/84, 6/30/99
Lead	AL = 0.015 mg/l	0.021	9/11/80	Copper	AL = 1.3 mg/l	6.12	9/11/80
Secondary and Other IOC Contaminants (Optional Tests)							
Contaminant	Recommended Maximum (mg/l)		Results (mg/l)		Dates		
Sulfate			2.5		6/30/99		
Zinc			0.235		9/11/80		
Hardness, Total (AS CaCO ₃)			80.0 mg/l		9/11/80		
Total Dissolved Solids			38.7 mg/l		9/11/80		
Conductivity			33.0 µMHOS/cm		12/3/84		
			38.0 µMHOS/cm		9/11/80		
Regulated and Unregulated Synthetic Organic Chemicals							
Contaminant			Results		Dates		
29 Regulated and 13 Unregulated Synthetic Organic Compounds			None Detected		6/30/99		
Regulated and Unregulated Volatile Organic Chemicals							
Contaminant			Results		Dates		
21 Regulated And 16 Unregulated Volatile Organic Compounds			None Detected		6/30/99		
Radiological Contaminants							
Contaminant		MCL	Results		Dates		
Gross Alpha, Including Ra & U		15 pC/l	0.6		6/30/99		
			0.75		2/9/81		
Gross Beta Particle Activity		4 mrem/year	1.3		2/9/81		

*ND = None Detected. AL = Action Level

Table 1-2. Ponderosa Terrace Estates Well #2 Test Results

Primary IOC Contaminants (Mandatory Tests)							
Contaminant	MCL (mg/l)	Results (mg/l)	Dates	Contaminant	MCL (mg/l)	Results (mg/l)	Dates
Antimony	0.006		Due 12/31/01	Nitrate	10	0.7	2/27/01
Arsenic	0.01		Due 12/31/01	Nickel	N/A		Due 12/31/01
Barium	2.0		Due 12/31/01	Selenium	0.05		Due 12/31/01
Beryllium	0.004		Due 12/31/01	Sodium	N/A		Due 12/31/01
Cadmium	0.005		Due 12/31/01	Thallium	0.002		Due 12/31/01
Chromium	0.1		Due 12/31/01	Cyanide	0.02		Due 12/31/01
Mercury	0.002		Due 12/31/01	Fluoride	4.0		Due 12/31/01
Secondary and Other IOC Contaminants (Optional Tests)							
Contaminant		Recommended Maximum (mg/l)	Results		Dates		
Alkalinity (CaCO ₃)			31 mg/l		2/27/02		
Calcium			6.04 mg/l		2/27/02		
pH			6.58		2/27/02		
Total Dissolved Solids			53 mg/l		2/27/02		
Langlier Index			-2.883		2/27/02		
Regulated and Unregulated Synthetic Organic Chemicals							
Contaminant			Results		Dates		
29 Regulated and 13 Unregulated Synthetic Organic Compounds					Due 12/31/01		
Regulated and Unregulated Volatile Organic Chemicals							
Contaminant			Results		Dates		
21 Regulated And 16 Unregulated Volatile Organic Compounds					Due 12/31/01		
Radiological Contaminants							
Contaminant		MCL	Results		Dates		
Gross Alpha, Including Ra & U		15 pC/l			Due 12/31/01		
Gross Beta Particle Activity		4 mrem/year			Due 12/31/01		

Final Susceptibility Ranking

Because of persistent positive total coliform bacteria test results Ponderosa Terrace Estates Well #1 automatically ranked highly susceptible to microbial contamination. Well #1 ranked moderately susceptible to all other classes of regulated contaminants. Well #2 ranked moderately susceptible to microbial and chemical contaminants. Risk factors associated with local geology added the most points to the final susceptibility scores. Final scores and ranking relative to each class of contaminant are summarized on Table 3. The complete analysis worksheet for the well is in Attachment A.

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

The final ranking categories are as follows:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- > 13 High Susceptibility

Table 2. Summary of Ponderosa Terrace Estates Susceptibility Evaluation

Final Susceptibility Scores/ Ranking				
	IOC	VOC	SOC	Microbial
Well #1	10/Moderate	10/Moderate	10/Moderate	*High
Well #2	7/Moderate	7/Moderate	7/Moderate	7/Moderate

*High. Automatically ranked highly susceptible based on sampling history.

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Ponderosa Terrace Estates, drinking water protection efforts should focus first on operating and maintaining the system in compliance with *Idaho Rules for Public Drinking Water Systems*. The system needs to develop a written schedule so important tasks like testing are attended to routinely.

Every water system should develop an emergency response plan. There is a simple fill-in-the-blanks form available on the DEQ website to guide systems through the emergency planning process.

An engineering report commissioned by the system in June 1999 estimated current total water needs are 26,000 gallons per day or 18 gallons per minute for domestic use and irrigation. The same report estimated the capacity of Well #1 at 35 gpm, but the system has been unable to deliver water to its customers on several occasions. This discrepancy needs to be investigated since there are several possible causes: seasonal variations in the flow capacity of the well; reservoir leaks, leaks in the distribution system, higher than expected demand. Accurate daily flow records for each well are vital for evaluating the cause of the water shortages. Metering individual connections would resolve questions about demands on the system, and would provide a rational basis for apportioning costs.

Regardless of how Ponderosa Terrace Estates customers and owners resolve their differences over administration of the system, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

Assistance

Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

DEQ Website: www.deq.state.id.us/water/water1.htm

Water suppliers serving fewer than 10,000 persons may contact Melinda Harper of the Idaho Rural Water Association (208) 343-7001 for assistance with drinking water protection strategies.

References Cited

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."

Idaho Department of Agriculture, 1998. Unpublished Data.

Idaho Division of Environmental Quality, 1994. Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho. Ground Water Quality Technical Report No. 5. Idaho Division of Environmental Quality. December 1994.

Idaho Division of Environmental Quality, 1996. Lower Payette River Agriculture Irrigation Water Return Study and Ground Water Evaluation, Payette County, Idaho. Water Quality Status Report No. 115.

Idaho Department of Environmental Quality, 1997. Design Standards for Public Drinking Water Systems. IDAPA 58.01.08.550.01.

Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.

Natural Resource Conservation Service, 1991. Idaho Snake-Payette Rivers Hydrologic Unit Plan of Work. March 1991.

United States Geological Survey, 1986. Quality of Ground Water in the Payette River Basin, Idaho. United States Geological Survey. Water Resources Investigation Report 86-4013.

University of Idaho. 1986. Ground Water Resources in a Portion of Payette County, Idaho. Idaho Water Resources Research Institute. University of Idaho. Moscow, Idaho. April 1986.

Attachment A

Ponderosa Terrace Estates Susceptibility Analysis Worksheets

Ground Water Susceptibility

Public Water System Name : **PONDEROSA TERRACE ESTATES**

Source: **WELL #1**

Public Water System Number : **1090101**

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1. System Construction		SCORE			
Drill Date	8/8/72				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES 1998				
Well meets IDWR construction standards	UNKNOWN	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		6			
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)		IOC	VOC	SOC	Microbial
		Score	Score	Score	Score
Land Use Zone 1A	Woodland	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A or present in tested	YES	NO	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0
Potential Contaminant / Land Use - ZONE 1B (3 YR. TOT)					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		0	0	0	0
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		0	0	0	0
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		0	0	0	0
Cumulative Potential Contaminant / Land Use Score		0	0	0	0
4. Final Susceptibility Source Score		10	10	10	9
5. Final Well Ranking		Moderate	Moderate	Moderate	*High

Ground Water SusceptibilityPublic Water System Name : **PONDEROSA TERRACE ESTATES**Source: **WELL #2**Public Water System Number : **1090101**

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1. System Construction		SCORE			
Drill Date	12/6/00				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	NO				
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	UNKNOWN	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		2			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		5			
		IOC	VOC	SOC	Microbial
		Score	Score	Score	Score
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)					
Land Use Zone 1A	WOODLAND	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0
Potential Contaminant / Land Use - ZONE 1B (3 YR. TOT)					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		0	0	0	0
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		0	0	0	0
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		0	0	0	0
Cumulative Potential Contaminant / Land Use Score		0	0	0	0
4. Final Susceptibility Source Score		7	7	7	7
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

BML (Business Mailing List)– This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System)

– Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

Closed Or Open UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.